REMARKS

In the Office Action of April 7, 2004, claim 1 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Luukkala, et al. (U.S. Patent No. 4,833,928).

Claims 2 and 3 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Luukkala in view of Nakaoka, et al. (U.S. Patent No. 5,251,491).

Claims 4-7 were allowed.

Applicants respectfully submit that claim 1 defines over Luukala, et al. Respectfully, Luukala, et al. does not disclose an apparatus for measuring the instability index in a moving web where the instability index of the web is greater than or equal to 0.5 and is measured by the equation v/(v+vd) or v/(vd-v) where v equals the speed of the web and vd equals the speed of the wave. Support for this claim amendment may be found on at least page 17, lines 3-16 of Applicants' application.

Applicants respectfully submit that it would have been non-obvious to modify Luukala, et al. in order to provide for an apparatus for measuring the instability index in a moving web where the instability index of the web is greater than or equal to 0.5. The apparatus called for in claim 1 of Applicants' application allows for, among other things, an apparatus for measuring the instability index in a moving web when the web is unstable. The apparatus described in Luukala, et al. is not capable of either measuring the instability index an unstable web (that is one with an instability index approaching 1.0) or a lightweight web such as a tissue.

Luukala, et al. is incapable of doing so due to the method of wave generation. In this regard, Luukala, et al. explicitly calls for a loud speaker 3 to generate a sound burst in order to induce a wave 2 on the web 1 (see Luukala, et al. at col. 3, lines 38-40; and

col. 4, lines 32-33, lines 44-46, and lines 53-55). As an alternative to the loud speaker 3, the sound source can be a compressed air whistle pipe or other device that produces sound having frequencies in the order of 100 to 500 Hz (see Luukala, et al. at col. 5, lines 23-27). Luukala, et al. explicitly teaches that the wave 2 is **not** to be generated by blowing air onto the wave 2, because such a method of wave generation is both inaccurate and creates the hazard of tearing the web (see Luukala, et al. at col. 1, lines 62-65).

Applicants respectfully submit that the use of the loud speaker 3 in Luukala, et al. is insufficient for measuring the instability index in a low-tension, low-basis weight web. Additionally, Applicants respectfully submit that the method of wave generation in the device of Luukala, et al. makes it impossible to measure the instability index in a moving web where the instability index of the web is greater than or equal to 0.5.

Applicants respectfully submit that the method and apparatus disclosed in Luukala, et al. is incapable of being modified in order to arrive at the apparatus set forth in claim 1 of Applicants' application. As such, Applicants respectfully submit that claim 1 defines over Luukala, et al. and is in condition for allowance. Further, all claims that depend from claim 1 (claims 2 and 3) are also in condition for allowance. The rejections to claims 2 and 3 are made moot due to the allowance of claim 1.

Applicants respectfully submit that all claims are allowable and that the application is in condition for allowance. Favorable action thereon is respectfully requested. The Examiner is encouraged to contact the undersigned at the Examiner's convenience in order to resolve any remaining issues.

Respectfully submitted,

DORITY & MANNING,
ATTORNEYS AT LAW, P.A.

Date: June 16, 2004

Neal P. Pierotti

Neal P. Pierotti
Registration No. 45,716

Post Office Box 1449
Greenville, South Carolina 29602 USA
Telephone: 864-271-1592
Facsimile: 864-233-7342